



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/808,955	03/25/2004	Henry W. Sullivan	Tie Tek-001:D	6356
21897	7590	06/06/2005	EXAMINER	
THE MATTHEWS FIRM 2000 BERING DRIVE SUITE 700 HOUSTON, TX 77057			DEL SOLE, JOSEPH S	
			ART UNIT	PAPER NUMBER
			1722	

DATE MAILED: 06/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/808,955

Applicant(s)

SULLIVAN ET AL.

Examiner

Joseph S. Del Sole

Art Unit

1722

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-12,15,17-24 and 26-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6,8-12,15,17-24 and 26-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 26 recites the limitation "said rod" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3-6, 8-9 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Fritsch (3,477,101).

Fritsch teaches an apparatus having a mold (Figs 6 and 7, #26) having at least one side wall (Fig 7, #16) defining an interior portion and an opening for injecting material into the interior portion (Fig 7, #14); a member (Fig 7, #27) in sealable connection with the interior portion for adjustably controlling a density of the material; the controlling member is a back pressure piston (Fig 7, #27) capable of sliding at

Art Unit: 1722

variable speed along the interior portion; the member includes a brake (Fig 7, #s 31, 32 or 33) and a gear (Fig 7, #s 19 and 25 broadly act as a gear); a valve means upstream from the mold (as claimed, the stoppage of worm 17 reads on a; col 5, lines 60-70); the mold (Figs 6 and 7, #26) having at least one end (Fig 7, #27) wherein the mold further has a rod (Fig 7, #23); the rod is pushed outwardly as the mold fills whereby the outward end of the rod is detected by a sensor when the mold is filled (col 5, lines 60-70), the sensor further actuating the valve means.

5. Claims 1, 3-6 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Valyl (5,082,604).

Valyl teaches an apparatus having a mold (Figs 1, #4) having at least one side wall (Fig 1, #5) defining an interior portion, the mold having an opening for injecting material into the interior portion; a member (Fig 1, #7) in sealable connection with the interior portion for adjustably control a density of material; the controlling member is a back pressure piston (Fig 1, #7) capable of sliding at a variable along the interior portion for controlling the density of the material; the member includes a brake and a gear (Fig 1); a valve positioned upstream from the mold to shut off the flow of the material (Fig 1, #10).

6. Claims 1, 3, 8, 15 17 and 26 are rejected under 35 U.S.C. 102(b) as being anticipated by Sasaki et al (5,370,518).

Sasaki et al each an apparatus for making a member in a mold having a chamber for mixing materials (Fig 5, #71, the chamber invariably mixes material as it is transferred); an extruder for filing the mold with the materials (Fig 5); a member for

Art Unit: 1722

adjustably controlling a density of the materials as the mold is filled (Fig 5); a valve means capable of allowing flow when the mold is empty and blocking flow when the mold is full (Fig 5, #81); an indicator means for sensing material in the mold thereby actuating the valve means (col 4, line 64 - col 5, line 18 and (col 10, lines 47 - 66); means to push a rod (Fig 1, #110) inwardly and push the member out to the mold after the member is formed.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

Art Unit: 1722

not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Fritsch (3,477,101) or Valyl (5,082,604) in view of Von Holdt, Sr (5,380,184).

Fritsch and Valyl each teach the invention as discussed above.

Fritsch and Valyl each fail to teach a means to divert the material to another mold that is not filled, the means being a diverter valve and a first and second diverter station.

Von Holdt, Sr teaches a diverter valve (Fig 2, #32) for the purpose of alternately feeding a first (Fig 3, #18) and second (Fig 3, #20) diverter station (col 1, line 55 - col 2, line 5).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the inventions of Fritsch and Valyl with a diverter valve as taught by Von Holdt, Sr because it would enable multiple products to be made with multiple molds each alternatively supplied by a single source.

11. Claims 10-12 and 18-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al (5,370,518) in view of Von Holdt, Sr (5,380,184).

Sasaki et al teach the apparatus as discussed above.

Sasaki et al fail to teach the members being molded in a plurality of molds; the valve means to divert the flow to a mold that is not filled; the valve means is a diverter valve; a first diverter station and a second diverter station.

Art Unit: 1722

Von Holdt, Sr teaches a diverter valve (Fig 2, #32) for the purpose of alternately feeding a first (Fig 3, #18) and second (Fig 3, #20) diverter station (col 1, line 55 - col 2, line 5).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Sasaki et al with a diverter valve as taught by Von Holdt, Sr because it would enable multiple products to be made with multiple molds each alternatively supplied by a single source.

12. Claims 22, 23 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al (5,370,518) in view of Fritsch (3,477,101).

Sasaki et al teach the apparatus as discussed above.

Sasaki et al fail to teach the mold further having at least one end confining the materials and a sliding rod extending outward from the end of the mold, the sliding rod moving outwardly as the mold is filled; wherein the is detected by a sensor when the mold is full or substantially full.

Fritsch teaches the use of a mold having a sliding rod (Fig 7, #23) with a piston (Fig 7, #27), a gear (Fig 7, #s 19 and 25 act as a gear) and a brake (Fig 7, #s 31-33) extending outward from an end of the mold, the rod moving outwardly as the mold is filled for the purpose of using a single mold to form products having different final lengths (col 3, lines 20-23).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Sasaki et al with a slug shaped mold having therein a piston and rod as taught by Sasaki et al because it

Art Unit: 1722

enables products of varying length to be formed with the single mold and the production of the product to be controlled as taught by Sasaki et al.

13. Claims 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al (5,370,518) in view of Fritsch (3,477,101) and further in view of Von Holdt, Sr (5,380,184).

Sasaki et al and Fritsch teach the apparatus as discussed above.

Sasaki et al fail to teach the members being molded in a plurality of molds; the valve means to divert the flow to a molt that is not filled; the valve means is a diverter valve; a first diverter station and a second diverter station.

Von Holdt, Sr teaches a diverter valve (Fig 2, #32) for the purpose of alternately feeding a first (Fig 3, #18) and second (Fig 3, #20) diverter station (col 1, line 55 - col 2, line 5).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Sasaki et al with a diverter valve as taught by Von Holdt, Sr because it would enable multiple products to be made with multiple molds each alternatively supplied by a single source.

14. Claims 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al (5,370,518) in view of Plastino (5,732,858).

Sasaki et al teach the apparatus as discussed above.

Sasaki et al fail to teach a cooling rack.

Plastino et al teach a cooling rack (Fig 10, #80) for the purpose of cooling a molded product (col 6, lines 20-25).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Sasaki et al with a cooling rack as taught by Plastino et al because it further enables cooling of a product post-molding.

15. Claims 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al (5,370,518) in view of Rettenbacher (5,916,503).

Sasaki et al teach the apparatus as discussed above.

Sasaki et al fail to teach a texturing member.

Rettenbacher teaches a texturing member (Fig 2, #s 320 and 330) for the purpose of texturing a member after it is molded (col 7, lines 50-60).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Sasaki et al with texturing member subsequent to the molding apparatus because such a member would enable texture to be applied to a surface of the molded product.

16. Claims 30-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sasaki et al (5,370,518) in view of Hammer et al (4,626,189).

Sasaki et al teach the apparatus as discussed above.

Sasaki et al fail to teach a cooling bath for cooling the mold and means to put the mold into the cooling bath and means to take the mold out of the cooling bath.

Hammer et al teach a cooling bath (Fig 1, #50) into and out of which the mold can be put/taken for the purpose of cooling the molds for reuse (col 6, lines 20-23).

It would have been obvious to one having ordinary skill in the art at the time of the Applicant's invention to have modified the invention of Sasaki et al with a cooling bath as taught by Hammer et al because a cooling bath enables quicker cooling of a mold to decrease turnaround sound.

Response to Arguments

17. Applicant's arguments filed 5/9/05 have been fully considered but they are not persuasive.

The Applicant argues that Fritsch is not capable of controlling the density of a product formed.

The Examiner disagrees. Regardless of the lack of a recitation to a use of the invention of Fritsch to control density, it is clear that by braking the piston, but continuing to inject into the cavity density will be affected.

The Applicant argues that neither Fritsch nor Valyl teach a mech valve.

The Examiner notes that there is no limitation to a mech valve in the claims.

Correspondence

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Joseph S. Del Sole whose telephone number is (571) 272-1130. The examiner can normally be reached on Monday through Friday from 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Benjamin Utech, can be reached at (571) 272-1137. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306 for both non-after finals and for after finals.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from the either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 1722

you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 886-217-9197 (toll-free).

Joseph S. Lee Sole

J.S.D.

June 1, 2005